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REMARKS

The Office Action of September 29, 2003 has been received and carefully reviewed. Accordingly, claims 2, 4, 9, 18-26 and 37 have been amended, new claim 38 has been added combining the features of original claims 1, 3 and 10, and claims 3, 10 and 36 have been canceled; therefore, claims 2, 4-9, 11-35, 37 and 38 are pending. Claims 27-35 have been withdrawn from consideration as being directed to a non-elected invention. In view of the above amendments and the following remarks, further consideration of this application is now requested.

With regard to the Examiner's objection to the drawings, under 37 C.F.R. 1.84, the Applicants hereby submit four new drawing sheets replacing the two drawing sheets containing original Figures 2 and 3. The four new drawing sheets contain Figures 2a-2d and Figures 3a-3b illustrating the claimed positive-fit connections, e.g., bayonet of Figure 2b, quick screw of Figure 2c and snap connection of Figure 2d, of the various components, i.e., the reaction vessels 2 of Figure 1, the closure carrier 6 of Figure 3a, the closure element 3 having a closure section 4 and an actuating section 5 of Figures 4 and 5 which addresses the Examiner's requirement to illustrate the claimed elements. Note, the tenon part 8 of the closure element 3 is shown in original Figure 5; while the link section 7,9 of the closure carrier is illustrated in original Figure 3a and new Figure 3b. Further, the Figures 2b-2d illustrate the cooperation of the external surface of the actuating section 5 with interior surface of the access opening of the closure carrier 6; while Figures 2b and 4 illustrate the cambered surface of the closure section 4 and Figure 6 clearly illustrates the tool 11 which is placed into the interior of the actuating section 5 as described in paragraph [0041] of the original specification. Acceptance of the new drawing sheets is respectfully requested.

Turning to the formality objection to claims 1, 3, 10, 18, 24, 25 and 37 and the formality rejection of claims 1-26, 36 and 37, under §112 (second paragraph), the above amendments to claims 2, 4, 9, 18-26 and 37, as well as newly added claim 38, provide the required structure for the functions specified in those claims. Such is

believed to be believed sufficient, when viewed in light of the specification, including the new drawings, to overcome the current formality objections and rejection. Further, it is noted that the formality rejections under § 112 (second paragraph) fails to explain why the Examiner regards the claims to lack clarity and precision, but instead asks questions of the Applicant. This manner of formulating such rejections is not sanctioned by the USPTO and is contrary to the recently updated section of the MPEP 2173.02 (Page 2100-199, second column) which requires the Examiner when providing a § 112 (second paragraph) rejection to also provide an “analysis as to why the phrase(s) used in the claim is ‘vague and indefinite’” Such an analysis, based upon the teachings of the specification was not performed or presented by the Examiner in the Office Action. Consequently, it is respectfully requested (as a result of the above amendments to the specification, drawings and claims) that the Examiner’s formality objection and rejection, under § 112 (second paragraph), of the claims be withdrawn.

Turning to the Examiner’s rejection of claims 1-26, 36 and 37, under §112 (first paragraph), regarding the alleged failure of the Applicants specification to convey to one of ordinary skill in the prior art that the Applicants had possession of what is a positive-fit and non-fit connection, a bayonet connection, how the socket and closure element connect with each other or how the actuation tool interacts with the closure element, the Applicants respectfully traverse this rejection. A reading of the specification as amended at paragraphs [0023]-[0043], along with the new drawing Figures 2a-2d and 3a-3b, clearly show the various components of an assembled, positive-fit (bayonet of Figure 2b, quick screw of Figure 2c, snap connection of Figure 2d) connection and an unassembled, non-fit connection (Figures 2a, 3a, 5). Further, Figures 2a and 6, along with paragraph [0041], clearly describes the positioning of the tool 11, with the positive-fit closure element 12 (which interacts with the internal surface of the actuating section 5 of closure element 3) and the pressure tenon 13 for pressing the bayonet fit of the closure section 4, shown for example in Figure 2b. Finally, the prior art references of record such as DE 34 07 787 A1, DE 24 58 667 A1, DE 26 04 540 A1 (showing bayonet connections) and USP 5,603,899 (showing screw

connections) more than adequately teach that such types of connections are known for use in sealing a reaction vessel or container. Clearly, the specification as filed, and as now amended, provides to one of ordinary skill in the art the understanding that the Applicants had possession of the various types of components, assembled and unassembled, that are presently claimed at the time of filing the application. Withdrawal of the §112 (first paragraph) rejection for lack of a proper written description is respectfully requested.

The rejection of claims 12-17, under §112 (first paragraph), which asserts that the disclosure does not adequately teach one of ordinary skill in the prior art how to make and use the closure handling device 11 to be a positive-fit, screw, snap or bayonet connection with the interior surface (closure handling element 10) of the actuating section 5 on closure element 3, is also respectfully traversed. Again the specification as originally filed, particularly paragraph [0041] and Figures 2a, 5 and 6, clearly teaches one of ordinary skill in the prior art that when the positive-fit closure element 12 of the tool 11 is positioned inside the actuating section 5 of the closure element 3 (i.e. bayonet-like), it can contact (positive-fit) the closure handling element 10, and, further, is able to turn around its axis into the indentation beneath the closure handling element 10, shown in Figure 5, which would be either a snap fit or screw connection. Again, the Applicants assert that the securement configurations of claim 12-17 and use of the tool 11 is fully supported by the original specification such that one of ordinary skill in the prior art would be able to make and use the invention of claims 12-17. Furthermore, all of the types of connections in question are well known to those of ordinary skill in the art and since a specification need only be written to the level of skill in the art, it is hard to imagine that one of ordinary skill in the art would not understand how to implement such basic types of connections. Therefore, withdrawal of the §112 (first paragraph) rejection for lack of enablement is respectfully requested.

With regard to the Examiner's rejections of:

Claims 1-4, 11, 19-22, 25 and 26, under § 102(b), as being anticipated by the Dubrow et al. ('292) document

Claims 1-4, 11, 19, 20 and 25, under § 102(b), as being anticipated by the Malmqvist (WO '292) document,

Claims 5-10, 12-18 and 37, under § 103(a), as being obvious in view of the combination of teachings of Dubrow et al. ('343) or Malmqvist (WO'292) with DE 34 07 787 A1, DE 24 58 667 A1, DE 26 04 540 A1, Franciskovich et al. ('899) and Lenardo et al. ('648),

Claim 36, under § 103(a), as being obvious in view of the teachings of Dubrow et al. ('343), and

Claims 23 and 24, under § 103(a), as being obvious in view of the combination of teachings of Dubrow et al. ('343) with Horton ('574) and Bayan ('015),

Each of these rejections is also traversed.

Specifically, with regard to the Examiner's rejection, under §102(b), of claims 1-4, 11, 19-22, 25 and 26 as being anticipated by the Dubrow et al. ('343) patent, the Applicants point out that the wording of the new main claim 38 is believed to overcome this rejection. If part 200 of Dubrow et al. is considered a closure carrier (see page 10, line 9 of the office action), it is the closure carrier that forms a number of access apertures which are sealed by closure sections 256 of corresponding individual closure elements. Therefore, in Dubrow et al. there is no closure carrier on top of a set of reaction vessels with the reaction vessels being tightly sealed by individual closure elements as presently claimed. In Dubrow et al., the patent has reaction vessels below the access openings and the access openings in the closure carrier are the only parts that are sealed.

The construction of the arrangement for the contamination-free processing of reaction sequences according to the presently claimed invention (claim 38) is completely different in its concept to use 1) the closure carrier for positioning and attachment of the individual closure element and 2) to use the closure section of the individual closure element for an individual closure of the specific reaction vessel below the closure carrier. Since each feature of the presently claimed invention is not shown by Dubrow et al., anticipation cannot exist, and, therefore, the rejection, under

§102(b), of claims 1-4, 11, 19,-22, 25 and 26 as being anticipated by the Dubrow et al. ('343) patent must now be withdrawn

With regard to the rejection, under §102(b), of claims 1-4, 11, 19, 20 and 25 as being anticipated by the Malmqvist (WO '292), Fig 2. of Malmqvist along with Fig 4 shows an arrangement with a closure carrier 6 placed on top of a plate 5 carrying a number of reaction vessels 1. The closure carrier 6 comprises an access opening for each one of the reaction vessels 1 that are covered therewith, each access opening being aligned with the access aperture of the corresponding reaction vessel 1 below the closure carrier 6. An individual closure element 4 per reaction vessel 1 is provided which comprises a closure section below the closure carrier 6 which is able to tightly seal the access aperture of the corresponding reaction vessel 1.

However, in this construction, the closure carrier 6 is kept at a distance from the plate 5 carrying the reaction vessels 1 (Fig 2 and Fig 4), as is explained on page 4, lines 21 to 24 of Malmqvist. Therein, the phrase "in close contact" is used, but it is not explained that the reaction vessels 1 will be closed by element 4 as, in contrast, shown in Fig 1 for a single separate reaction vessel.

Furthermore, the design of the access opening of the closure carrier and of the actuating section of the individual closure element is selected in order to realize a releasable friction fit between carrier 6 and closure element 4. Therefore, it is impossible in Malmqvist to position all individual closure elements on all reaction vessels simultaneously by placing the closure carrier with the closure elements onto the plate with the reaction vessels. This is not possible in Malmqvist, because the closure element 4 (or at least some) will pop out of the sockets in the closure carrier because the matching of forces for all components is difficult with such friction fit. This confirms the initial discussion of above that in Malmqvist the plates 5, 6 will be kept in a distance from each other all the time.

Since the Malmqvist document fails to teach each feature of the presently claimed invention, anticipation cannot be established; consequently, it is requested that the rejections of claims 1-4, 11, 19, 22 and 25, under § 102(b), be withdrawn.

With regard to the rejection of claims 5-10, 12-18, 23, 24, 36 and 37, under § 103(a), as being obvious in view of the teachings of Dubrow et al. ('343) or Malmqvist (WO'292) alone or combined with (DE 34 07 787 A1, DE 24 58 667 A1, DE 26 04 540 A1, Franciskovich et al. ('899) and Lenardo et al. ('648)) or Bayan ('015). The Applicants assert that the arguments presented above regarding the deficiencies of Dubrow et al. or Malmqvist are relevant to the § 103(a) as well. Again, it is to be emphasized that neither Dubrow et al. nor Malmqvist disclose a closure forming a positive-fit connection with the closure carrier. As the Examiner is aware, positive-fit connection is defined to one of ordinary skill in the prior art as a connection that includes an interlocking of the parts involved. In contrast, Dubrow and Malmqvist each disclose only a friction fit.

However, as pointed out above, a friction fit of the closure elements in the closure carrier will not normally allow the setting of the closure elements jointly with the closure carrier onto all the reaction vessels. A releasable positive-fit connection between closure elements and closure carrier instead allows forces to be transmitted between closure elements and closure carrier that are structurally different from the forces needed to seal the access apertures of the reaction vessels.


It is this difference between the instantly claimed positive-fit connection between the actuating section of the individual closure element and the socket in the closure carrier on the one hand and the mere friction-fit sealing connection of the prior art references between the closure section of the closure element and the access aperture of the reaction vessel on the other hand that forms the essential difference of the invention in comparison with the prior art. A review of the secondary references reveals that, while teaching various connection structures, none of the secondary references teaches the positive-fit relationship of the reaction vessel, closure carrier and closure elements presently claimed. Since neither Dubrow et al. or Malmqvist, alone or in combination with the teachings of the various secondary references, either explicitly teaches or suggests to one of ordinary skill in the prior art each of the

presently claimed limitations, the rejections, under § 103(a), are believed to now be improper and must be withdrawn.

While the present application is now believed to be in condition for allowance, should the Examiner find some issue to remain unresolved, or should any new issues arise, which could be eliminated through discussions with Applicants' representative, then the Examiner is invited to contact the undersigned by telephone in order that the further prosecution of this application can thereby be expedited.

Lastly, it is noted that a separate Extension of Time Petition accompanies this response along with an authorization to charge the requisite extension of time fee to Deposit Account No. 19-2380 (740116-317). However, should that petition become separated from this Amendment, then this Amendment should be construed as containing such a petition. Likewise, any overage or shortage in the required payment should be applied to Deposit Account No. 19-2380 (740116-317).

Respectfully submitted,

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